

DOCKET NO. D-69-84-2

DELAWARE RIVER BASIN COMMISSION

**Solvay Solexis
Ground Water Withdrawal
West Deptford Township, Gloucester County, New Jersey**

PROCEEDINGS

This docket is issued in response to an Application submitted by Solvay Solexis to the Delaware River Basin Commission (DRBC or Commission) on July 15, 2005, for renewal of an allocation of ground water and review of a ground water withdrawal project approved by the DRBC on May 28, 1969 (Application). The project was approved by the New Jersey Department of Environmental Protection (NJDEP) on May 25, 2006 (Permit No. 2234P), subject to approval by the DRBC.

The Application was reviewed for approval under Section 3.8 of the *Delaware River Basin Compact*. The Gloucester County Planning Board has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on September 27, 2006.

A. DESCRIPTION

1. **Purpose.** The purpose of this project is to increase the allocation of water from 2 million gallons per thirty days (mg/30 days) to 60 mg/30 days to the docket holder's industrial supply distribution system through two existing wells (Wells Nos. 417 and 418) and to supply up to 14.91 mg/30 days of water to the docket holder's ground water remediation program through four new wells (Wells Nos. RW1 through RW4).

2. **Location.** The project wells are located in the Delaware River Watershed, in the Upper and Lower Potomac-Raritan-Magothy (PRM) Formations.

Specific location information has been withheld for security reasons.

3. **Area Served.** The wells will supply water to the docket holder's industrial supply and ground water remediation program as outlined on a map entitled "Site Plan" submitted with the application. For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in the Decisions section of this docket.

4. Physical features.

a. Design criteria. Solvay Solexis has been conducting investigations in response to the NJDEP Industrial Site Recovery Act and the U.S. Environmental Protection Agency Resource Conservation and Recovery Act investigations at the Solvay Solexis facility in Thorofare, New Jersey since 1989. Investigation results indicate that the ground water underlying a portion of the active manufacturing area contains volatile organic compounds at concentrations exceeding the New Jersey Class IIA Ground Water Quality Criteria and site-specific compounds at concentrations exceeding the New Jersey Generic Ground Water Criterion for non-carcinogens. The docket holder will operate four new wells to remediate the contaminated ground water and will withdraw up to 14.91 mg/30 days.

The docket holder also has an existing average and maximum water demand of 25.42 mg/30 days and 36 mg/30 days, respectively, serving the industrial supply system. Within the next ten years, increases in production are projected to increase the demand to a maximum withdrawal of 60 mg/30 days. This will increase the total system average and maximum water demands to 37.98 mg/30 days and 74.91 mg/30 days, respectively. Water for sanitary and potable use at the facility is supplied by West Deptford Township.

b. Facilities. The existing and proposed project wells have the following characteristics:

WELL NO.	DEPTH (FEET)	CASED DEPTH (FEET)/ CASING DIAMETER (INCHES)	PUMP CAPACITY (GPM)	FORMATION	YEAR DRILLED
417	278	278 / 16	1000	Lower PRM	1970
418	290	290 / 16	500	Lower PRM	1970
RW1	69.5	29.5 / 6	48	Upper PRM	2004
RW2	93	33 / 6	48	Upper PRM	2004
RW3	117	37 / 8	141	Upper PRM	2004
RW4	115	35 / 8	98	Upper PRM	2004

All wells are metered.

Water from the remediation system will be treated by air-stripping and heavy metal removal.

The project wells are above the 100-year flood elevation.

The water system is presently interconnected with the West Deptford Township Water Department.

c. **Other.** The treated ground water from the remediation activity will be re-injected into the aquifer using two on-site injection wells, pending state approval. The existing wastewater generated by the industrial facility is treated and discharged as follows: the inorganic portion of the wastewater is discharged to the Delaware River and approved by DRBC Docket No. D-93-15 on May 26, 1993 and by the NJDEP on February 1, 2004 (Permit No. NJ0005185); the organic portion of the wastewater is conveyed to the Gloucester County Utilities Authority which discharges to the Delaware River and was approved by DRBC Docket No. D-90-75 CP-2 on May 10, 2006 approved by the NJDEP on September 1, 2004 (Permit No. NJ0024686). The treatment facilities have adequate capacity to receive wastewater from the proposed project.

d. **Cost.** The overall cost of the ground water remediation project is estimated to be \$4,000,000.

B. FINDINGS

The project is designed to conform to the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

The NJDEP water allocation is for a limited period and is not subject to automatic renewal. The permittee is in a Critical Area designated by the State of New Jersey and is subject to such requirements as may be necessary pursuant to N.J.A.C. 7:19-8.

Wells Nos. 417 and 418 are screened in the Potomac-Raritan-Magothy Aquifer and are located within the threatened portion of the NJDEP's Water Supply Critical Area No. 2. Accordingly, the docket holder has been mandated by the NJDEP to limit the total withdrawal from these wells to 301.13 mg/year.

Wells Nos. RW1 through RW4 are screened in the Potomac-Raritan-Magothy Aquifer and are located within the threatened portion of the NJDEP's Water Supply Critical Area No. 2. Accordingly, the docket holder has been mandated by the NJDEP to limit the total withdrawal from these wells to 175.55 mg/year.

The DRBC estimates that the project withdrawals, used for the purpose of industrial supply and ground water remediation and injection result in a consumptive use of 10 percent of the total water use. The DRBC definition of consumptive use is defined in Article 5.5.1.D of the *Administrative Manual – Part III – Basin Regulations – Water Supply Charges*.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

The docket holder conducted a pumping test on new Wells Nos. RW1, RW2, RW3 and RW4 to assess any potential impacts to nearby water users. Well No. RW1 was pumped at an average rate of 46 gallons per minute, and the maximum drawdown was 19.33 feet. Maximum drawdown among the observation wells was 0.2 feet. Well No. RW2 was pumped at an average rate of 51 gallons per minute, and the maximum drawdown was 9.13 feet. Maximum drawdown among the observation wells was 0.17 feet. Well No. RW3 was pumped at an average rate of 125 gallons per minute, and the maximum drawdown was 5.96 feet. Maximum drawdown among the observation wells was 1.17 feet. Well No. RW4 was pumped at an average rate of 125 gallons per minute, and the maximum drawdown was 3.23 feet. Maximum drawdown among the observation wells was 1.34 feet. No adverse impact is anticipated with the operation of this project.

C. DECISION

I. Effective on the approval date for Docket No. D-69-84-2 below, Docket No. D-69-84 is terminated and replaced by Docket No. D-69-84-2.

II. The project and appurtenant facilities as described in the Section entitled “Physical features” above are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the NJDEP in its Water Allocation permit and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission’s.

b. The wells and operational records shall be available at all times for inspection by the DRBC.

c. The wells shall be operated at all times to comply with the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

d. During any 30-day period, the total withdrawal from Wells Nos. 417 and 418 shall not exceed 60 million gallons. The total withdrawal from Wells Nos. 417 and 418 shall not exceed 301.13 million gallons per year. During any 30-day period, the total withdrawal from Wells Nos. RW1, RW2, RW3 and RW4 shall not exceed 14.91 million gallons. The total withdrawal from Wells Nos. RW1, RW2, RW3 and RW4 shall not exceed 175.55 million gallons per year.

e. The pumping equipment capacity for the ground water remediation project may be increased and well locations may be changed or added provided that the total allocation limits are not exceeded. The docket holder must notify the Commission in writing no less than thirty days prior to any such changes.

f. The wells shall be equipped with an airline static water level monitoring system so that water levels may be measured under all conditions. Existing wells are to be similarly equipped, where possible, with an airline static water level monitoring system as repairs or modifications are made at each existing well.

g. Upon completion of construction of the remediation project, the docket holder shall submit a statement to the DRBC, signed by the docket holder's engineer or other responsible agent, advising the Commission that the construction has been completed in compliance with the approved plans, giving the final construction cost of the approved project and the date the project is placed in operation.

h. This docket approval for the remediation wells shall expire three years from date below unless prior thereto the docket holder has commenced operation of the subject project or has expended substantial funds (in relation to the cost of the project) in reliance upon this docket approval.

i. The project withdrawals shall be metered with an automatic continuous monitoring device that measures to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted if maintenance of the 5 percent performance is not technically feasible or economically practicable. A record of monthly withdrawals shall be maintained, and monthly totals shall be reported to the NJDEP quarterly and shall be available at any time to the Commission if requested by the Executive Director.

j. The docket holder shall continue to implement its Water Conservation Plan as approved by NJDEP, and shall report to the NJDEP on actions taken pursuant to this program and the impact of those actions as requested by the NJDEP.

k. The docket holder shall implement to the satisfaction of the NJDEP, a drought or other water supply emergency plan.

l. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

m. The docket holder is permitted to provide the water approved in this docket to the areas included in Section A.3. Area Served of this docket. Any expansion beyond those included in Section A.3. Area Served is subject to DRBC review and approval in accordance with Section 3.8 of the *Compact*.

n. A complete application for the renewal of this docket, or a notice of intent to cease the operations (withdrawal, discharge, etc.) approved by this docket by the expiration date, must be submitted to the DRBC at least 12 months prior to the expiration date below (unless permission has been granted by the DRBC for submission at a later date), using the appropriate DRBC application form. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below, the terms and conditions of this docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

o. The issuance of this docket approval shall not create any private or proprietary rights in the water of the Basin, and the Commission reserves the rights to amend, alter or rescind any actions taken hereunder in order to insure the proper control, use and management of the water resources of the Basin.

p. If the operation of this project significantly affects or interferes with any domestic or other existing wells or surface water supplies, or if the docket holder receives a complaint by any user of wells or surface water supplies within the zone of influence of the withdrawal, the docket holder shall immediately notify the Executive Director of any complaints by users of wells or surface water supplies within the zone of influence of the withdrawal, and unless excused by the Executive Director, shall investigate such complaints. The docket holder should direct phone call notifications of potential well or surface water interference or complaints of interference to the DRBC Project Review Branch at 609-883-9500, extension 216. Oral notification must always be followed up in writing directed to the Executive Director. In addition, the docket holder shall provide written notification to all potentially impacted users of wells or surface water supplies of the docket holder's responsibilities under this condition. Any well or surface water supply which is substantially adversely affected, or rendered dry or otherwise unusable as a result of the docket holder's project withdrawal, shall be repaired, replaced or otherwise mitigated at the expense of the docket holder. A report of investigation and/or mitigation plan prepared by a hydrologist shall be submitted to the Executive Director as soon as practicable. The Executive Director shall make the final determination regarding the validity of such complaints, the scope or sufficiency of such investigations, and the extent of appropriate mitigation measures, if required. The Executive Director may modify or suspend this approval, or require mitigating measures, pending additional review.

q. During any water emergency or other non-emergency declaration by the Governor of New Jersey, NJDEP or the Commission, water service or use by the project docket holder pursuant to this docket approval shall be subject to any order or restriction governing those non-essential uses specified by the NJDEP to the extent that they may be applicable, and to any other emergency resolutions or orders adopted by the Commission.

r. The docket holder and any other person aggrieved by a reviewable action or decision taken by the Executive Director or Commission pursuant to this docket may seek an administrative hearing pursuant to Articles 5 and 6 of the Commission's *Rules of Practice and*

Procedure, and after exhausting all administrative remedies may seek judicial review pursuant to Article 6, section 2.6.10 of the *Rules of Practice and Procedure* and section 15.1(p) of the Commission's *Compact*.

BY THE COMMISSION

APPROVAL DATE: **September 27, 2006**

EXPIRATION DATE: **September 27, 2016**